APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,695	12/27/2004	Ben Pontius	100893.0001US	7295

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EXAMINER
MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
2165	

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	10/519,695	PONTIUS, BEN
Office Action Summary	Examiner	Art Unit	
	Tony Mahmoudi	2165	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>27 January 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>12/27/2004</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in
> (1) an application for patent, published under section 122(b), by another filed in the United States
> before the invention by the applicant for patent or
> (2) a patent granted on an application for patent by another filed in the United States before the
> invention by the applicant for patent, except that an international application filed under the treaty
> defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in
> the United States only if the international application designated the United States and was published
> under Article 21(2) of such treaty in the English language.

2. Claims 1 and 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Hunter

et al (U.S. Patent No. 5,606,690.)

   As to claim 1, <u>Hunter et al</u> teaches a method (see Abstract) for creating finite state

automata (FSA) that match patterns in parallel (see column 4, lines 31-36),

comprising:

   creating states of the finite state automata from a set of patterns to be matched

(see column 7, lines 27-53);

   passing over the set of patterns a second time (see column 16, lines 8-25, where

"passing over a second time" is read on "examined again"); and

   adding transitions to the states (see column 4, lines 32-37) to match all possible

patterns that can start within the set of patterns to be matched (see column 7, lines 27-

41.)

As to claim 3, <u>Hunter et al</u> teaches a method of creating a FSA that uses array-based transitions for an alphabet of size N, comprising:

representing each state as an object containing an array of N pointers to possible successive states (see column 14, lines 41-49, and see column 23, lines 1-10); and

using a numeric value of each member of the alphabet as an offset into the array to point to a next state (see column 13, lines 11-22.)

As to claim 4, <u>Hunter et al</u> teaches a method of creating a case-insensitive FSA (see column 7, lines 42-53, and see column 8, lines 20-25) by making each pattern all one case, comprising:

creating the FSA (see column 21, lines 52-61); and

adding corresponding transitions on each alphabetic character such that testing and conversion of case is not required (see column 8, lines 20-25, and see column 24, lines 39-52.)

As to claim 5, <u>Hunter et al</u> teaches a method for matching patterns, comprising:

using a numeric value of less than a complete set of bits of an input as an offset into an array (see column 13, lines 11-22, thereby reducing a size of the array (see column 16, lines 8-14.)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Hunter et al</u>

(U.S. Patent No. 5,606,690) in view of <u>Major et al</u> (U.S. Patent No. 5,455,932.)

As to claim 2, <u>Hunter et al</u> teaches the method further comprising:

iterating through the states (see column 15, lines 10-38, where "iterating through

the states" is read on "transition between state 400 and state 410");

determining whether input causes a move to an initial state (see column 15, lines

39-60); and

if the initial state has a different move on the input, changing a current state's

transition (see column 14, lines 50-58.)

<u>Hunter et al</u> does not teach the current state mirroring the initial state.

<u>Major et al</u> teaches a fault-tolerant backup system (see Abstract), wherein he

teaches the current state mirroring the initial state (see column 4, line 63 through

column 5, line 1, and see column 10, lines 45-48.)

Therefore, it would have been obvious to a person having ordinary skill in the art

at the time the invention was made to have modified <u>Hunter et al</u> by the teaching of

<u>Major et al</u>, because including the current state mirroring the initial state would

enable the system to run on a duplicate of the initial state without actually switching

states from current to the initial state.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Hunter et al</u>

(U.S. Patent No. 5,606,690) in view of <u>Allison et al</u> (U.S. Patent No. 6,549,960 B1.)

As to claim 6, <u>Hunter et al</u> does not teach using a hash function for matching

patterns composed of a 128 or 256 alphabet without overhead of larger arrays.

<u>Allison et al</u> teaches using a hash function for matching patterns composed of a

128 or 256 alphabet without overhead of larger arrays (see figure 13; see column 14,

lines 35-44 and see column 19, lines 36-44.)

Therefore, it would have been obvious to a person having ordinary skill in the art

at the time the invention was made to have modified <u>Hunter et al</u> by the teaching of

<u>Allison et al</u>, because matching patterns composed of a 128 or 256 alphabet would

result in faster pattern matching results.

Conclusion

6. Any inquiries concerning this communication or earlier communications from the

examiner should be directed to Tony Mahmoudi whose telephone number is (571)

272-4078. The examiner can normally be reached on Mondays-Fridays from 08:00

am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

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February 2, 2006